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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/613,028 | 07/07/2003 | Junichi Akama | 1713.1004 | 9384 |

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| EXAMINER |
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NGUYEN, TRUC T

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| ART UNIT | PAPER NUMBER |
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2833

DATE MAILED: 10/25/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

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|------------------------------|-------------------------------|------------------------------|--|
| Office Action Summary | Application No. 10/613,028 | Applicant(s) AKAMA ET AL. | |
| | Examiner Truc T. T. Nguyen | Art Unit 2833 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 09 August 2004.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,6-8,10-15 and 17-24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-8,10-15 and 17-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>5/20/04</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Dechelette et al. (US 5,116,230).

Regarding claim 1, Dechelette et al. discloses a connector comprising:

a housing (14); and

multiple pairs of signal contacts (42), each two signal contacts that are paired with each other being arranged side by side at a distance in the longitudinal direction of the housing, the multiple pairs of signal contact being arranged so as to form multiple arrays arranged side by side in the transverse direction of the housing, each of the multiple pairs of signal contacts that have an identical length; and

panel-shaped ground contacts (40) provided between respective, neighboring pairs of the multiple pairs of signal contact in each of the multiple arrays, each of the panel-shaped ground contacts being of a size sufficient to shield the multiple pairs of signal contacts from each neighboring pair and being provided commonly to the multiple arrays arranged side by side in the transverse direction of the housing.

Dechelette et al. do not specifically disclose the identical length of contacts is designed for balanced transmission. This feature is seen to be an inherent teaching of that device since a identical length of contacts is disclosed and it is apparent that the balance transmission effect must be present for the connector to function as intended.

Regarding claim 10, Dechelette et al. disclose a connector comprising:
signal contacts (42) arranged in two arrays and of a common length; and
panel-shaped ground contacts (40) that are commonly provided in the two arrays and-that divide each array of signal contacts into multiple pairs, the multiple pairs of signal contacts being adjacent to one another throughout the common length thereof.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-2, 6-7, 10-15, 17-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kemmick et al. (US 6,540,559) in view of Dechelette et al. (US 5,116,230).

Kemmick et al. disclose an electronic device comprising:
a wiring substrate (not shown) for a connector (100) mounted thereon;
the connector comprising:
a housing (102, 160);

multiple pairs of signal contacts (130) having bending ends (140) and arrange in a multiple arrays;

an array internal ground contacts (see Figure 1) is large enough to shield the pair of signal contacts, the array includes an intermediate ground contact (132) and having panel-shape like;

wherein the length of the housing in the longitudinal direction is greater than the distance between each pair of the signal contacts;

wherein substrate contact parts of the multiple pairs of signal contacts arranged one of the two arrays extend the opposite direction from substrate contact parts of the multiples pairs of signal contacts arranged in the other one of the two arrays.

wherein substrate contact parts of the multiple pairs of signal contacts arranged one of the two arrays face substrate contact parts of the multiple pairs of signal contacts arranged in the other one of the arrays, all the substrate contact parts extending in same direction;

wherein a pair of signal contacts arranged in one of the two arrays and a pair of signal contacts arranged in the other one of the two arrays exist between each two neighboring ground contacts;

wherein a pair of signal contacts arranged in one of the two arrays and a pair of signal contacts arranged in the other array that faces the one of the two arrays via an insulating member exists between each two neighboring ground contacts;

wherein a pair of signal one of the two arrays and pair contacts arranged the other array that faces the one of the two arrays a space exist between each two neighboring ground contacts;

wherein the ground contacts each has a and are provided across both two arrays;

wherein each of the ground contacts provided across both two arrays, and has top ends facing each other;

wherein each of the ground contacts has a pair of contact parts;

one of the pair of contact parts is aligned with substrate contact parts of the multiple pairs of signal contacts arranged one of the two arrays; and the other one the pair of contact parts is aligned with substrate contact parts of the multiple pairs of signal contacts arranged in the other one of the two arrays;

wherein parts of the signal contacts to be connected a mating connector extend in a direction perpendicular parts of the signal contacts be connected to a substrate;

wherein parts of the signal contacts to be connected a mating connector extend in the opposite direction from parts of the signal contacts to be connected to substrate;

wherein the signal contacts arranged in the two arrays are aligned at intervals the longitudinal direction of the connector;

wherein other signal contacts provided in each array, the other signal contacts each array are arranged at intervals, without the ground contacts being interposed among the other signal contacts.

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Kemmick et al. substantially disclosed the claimed inventions except for the signal contacts are identical in length and the ground contact divided the array signal contacts into multiple pairs.

Dechelette et al. teach array of signal contacts (42) have identical length and is divided into multiple pairs by a panel-shaped ground contacts (40).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide an identical length signal contacts and a panel-shape like between the pairs into Kemmick's connector, as taught by Dechelette et al. for minimizing electromagnetic interference.

5. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kemmick et al. (US 6,540,559) and Dechelette et al. (US 5,116,230) as applied in claim 1 above, and further in view of Matsumoto et al. (US 6,150,606).

In the modified connector, Kemmick et al. substantially disclose the claimed invention except for a shielding layer is formed on the housing.

Matsumoto et al. teach a shielding layer is coated on a surface of a connector case (see Abstract).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a shielding layer onto Kemmick's connector housing, as taught by Matsumoto et al. for reducing electromagnetic interference.

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Response to Arguments

Applicant's arguments with respect to claims 1-2, 6-8, 10-15, 17-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Truc T. T. Nguyen whose telephone number is 571-272-2011. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula Bradley can be reached on 571-272-2800 extension 33. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Truc T. T. Nguyen
Primary Examiner
Art Unit 2833

A handwritten signature in black ink, appearing to be 'Truc T. T. Nguyen', with a long horizontal line extending to the right.